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EXAMINER	
MISLEH, JUSTIN P	
ART UNIT	PAPER NUMBER
2622	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/232,265	Applicant(s) KNUUTILA ET AL.
	Examiner Justin P. Misleh	Art Unit 2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,9-11,13,16,19,21-37,44,45,47,49-57 and 59-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9-11,13,16,19,21-37,44,45,47,49-57 and 59-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 January 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 31, 2007 have been fully considered but they are not persuasive.

2. Applicant argues, "In particular the combined teaching fails to disclose or suggest the claimed features of independent claim 1 as follows:

> **'using the electronic device for controlling, whether the digital image information, captured by the camera module, is to be transferred to the electronic device as such, or in a reduced form; and'**

"In particular Endsley fails to disclose or suggest a system, method, or device in which the host device controls the hardware and software that provides communication between a camera module and the host device in a manner, according to the claims, that results in the host device controlling whether the digital image information, captured by the camera module, is to be transferred to the electronic device as such, or in a reduced form." (emphasis added by Applicant)

3. The Examiner respectfully disagrees with Applicant's position. Endsley et al. disclose, as stated in column 4 (lines 60 – 64), "The host computer 12 controls the camera picture-taking process by instructing the camera 10 when to take still or motion pictures, and setting the electronic exposure time and the analog gain in the CDS/gain block 24 via the microprocessor 38" (emphasis added). Endsley et al. further disclose, as stated in column 6 (lines 35 – 45), "As set forth in Table 1, the parameters include allowed values appropriate for two different camera configurations: therein called camera configuration 0 and camera configuration 1. Table 2 shows

a specific selection from the allowed values, wherein configuration 0 is a low resolution continuous (motion) configuration and configuration 1 is a full resolution single-shot (still) configuration. When the camera is first powered up, default values are stored such as those shown in the first column of Table 2 for the continuous capture mode and in the second column for the single-shot capture mode" (emphasis added). Therefore, Endsley et al. disclose wherein the host computer (12) controls the camera (10) to take motion (low-resolution) images or to take still (high-resolution) images. Accordingly, Endsley et al. disclose using the electronic device for controlling, whether the digital image information, captured by the camera module, is to be transferred to the electronic device as such, or in a reduced form, as claimed.

4. Applicant further states, "The grounds discussed above apply equally to the rejected dependent claims, all of which, by dependency, have the limitations described in the independent claims." Therefore, in view of the remarks above, the Examiner will maintain the prior art rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1, 3 – 5, 7, 9 – 11, 13, 16, 21 – 29, 31 – 37, 44, 45, 47, and 49 – 64** are rejected under 35 U.S.C. 103(a) as being unpatentable over Endsley et al. (US 6,005,613) in view of Griencewic (US 5,801,919).

7. For **Claims 1 and 62**, Endsley et al. disclose, as shown in figures 1 – 3, a method for transferring image information from a camera module (10) to an electronic device (12), the method comprising the steps of:

forming an image in the camera module (10) by means of an image sensor (20) comprising pixels (640x480) which convert light to which the pixels are exposed into an analogue signal (see column 3, lines 23 – 42),

converting said analogue signal into digital image information by analogue-to-digital conversion (26; see column 3, lines 23 – 42),

using the electronic device (12) for controlling, whether the digital image information, captured by the camera module (10), is to be transferred to the electronic device (12) as such ("full resolution"), or in a reduced form ("low resolution"; see column 4, lines 60 – 65; and column 6, lines 35 – 45); and

transferring the selected form of the digital image information from the camera module (10) to the electronic device (12) via an internal serial connection bus (14) of the electronic device (12; see column 3, lines 23 – 42).

Endsley et al. state, "<u>The host computer 12 controls the camera picture-taking process by instructing the camera 10 when to take still or motion pictures</u>, and setting the electronic exposure time and the analog gain in the CDS/gain block 24 via the microprocessor 38. The USB hardware and software provides communication between the host 12 and the camera 10 through the aforementioned abstraction called a 'pipe'. When the camera 10 is connected to the host 12, camera driver software running on the host 12 indicates the <u>latency and bandwidth</u> required for the camera" (emphasis added).

Endsley et al. further state, "The operational modes of the camera 10 can be adjusted from the host computer 12. More particularly, the microprocessor 38 includes camera registers 72 that store at least two different camera configurations communicated from the host computer 12 for controlling the image sensor in at least two modes, wherein each configuration includes information defining a plurality of camera parameters as shown in the first column of Table 1 … Many of these parameters are particularly useful in the continuous (motion video) capture mode, in order to provide a higher video frame rate, and in determining how the camera moves from one configuration to the other" (emphasis added).

Endsley et al. further disclose, as stated in column 6 (lines 35 – 45), "As set forth in Table 1, the parameters include allowed values appropriate for two different camera configurations: therein called camera configuration 0 and camera configuration 1. Table 2 shows a specific selection from the allowed values, wherein configuration 0 is a low resolution continuous (motion) configuration and configuration 1 is a full resolution single-shot (still) configuration. When the camera is first powered up, default values are stored such as those shown in the first column of Table 2 for the continuous capture mode and in the second column for the single-shot capture mode" (emphasis added). Therefore, Endsley et al. disclose wherein the host computer (12) controls the camera (10) to take motion (low-resolution) images or to take still (high-resolution) images. Accordingly, Endsley et al. disclose using the electronic device for controlling, whether the digital image information, captured by the camera module, is to be transferred to the electronic device as such, or in a reduced form, as claimed.

However, Endsley et al. do not disclose wherein the camera module is an integral part of the electronic device.

On the other hand, Griencewic also disclose a camera module that electrically interfaces with an electronic device to provide image data to the electronic device (see figure 1). Furthermore, Griencewic teach wherein the camera module (26) is an integral part of the electronic device (20; see column 3, lines 38 – 46).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included the camera module as an integral part of the electronic device (as taught by Griencewic in the camera module/electronic device system (disclosed by Endsley et al.) for the advantage providing an electronic device that reduces the amount of set-up and tear down time and reduces effort to carry the device (see column 1, lines 19 – 63).

8. For **Claims 7 and 63**, Endsley et al. disclose, as shown in figures 1 – 3, a camera module (10) connected to an electronic device (12), the camera module (10) comprising an image sensor (20) comprising pixels (640x480) which convert light to which the pixels are exposed into an analogue signal (see column 3, lines 23 – 42), an analogue-to-digital conversion (26; see column 3, lines 23 – 42), the camera module further comprising:

a serial connection circuit (40) for transferring the digital image information from the camera module (10) to the electronic device (12; see column 3, lines 23 – 42) and for receiving control information from the electronic device (see column 4, lines 60 – 67), wherein the control information operates to control the amount of the digital image information, captured by the camera module, to be transferred to the electronic device and further wherein said control information operates to control, whether the digital image information, captured by the camera module (10), is to be transferred to the electronic device (12) as such ("full resolution"), or in a reduced form ("low resolution") via a serial connection bus (14) of the electronic device (12) and

further wherein said control is executed by the electronic device (see column 4, line 60 – column 5, line 43).

Endsley et al. state, "The host computer 12 controls the camera picture-taking process by instructing the camera 10 when to take still or motion pictures, and setting the electronic exposure time and the analog gain in the CDS/gain block 24 via the microprocessor 38. The USB hardware and software provides communication between the host 12 and the camera 10 through the aforementioned abstraction called a 'pipe'. When the camera 10 is connected to the host 12, camera driver software running on the host 12 indicates the latency and bandwidth required for the camera" (emphasis added).

Endsley et al. further state, "The operational modes of the camera 10 can be adjusted from the host computer 12. More particularly, the microprocessor 38 includes camera registers 72 that store at least two different camera configurations communicated from the host computer 12 for controlling the image sensor in at least two modes, wherein each configuration includes information defining a plurality of camera parameters as shown in the first column of Table 1 … Many of these parameters are particularly useful in the continuous (motion video) capture mode, in order to provide a higher video frame rate, and in determining how the camera moves from one configuration to the other" (emphasis added).

Endsley et al. further disclose, as stated in column 6 (lines 35 – 45), "As set forth in Table 1, the parameters include allowed values appropriate for two different camera configurations: therein called camera configuration 0 and camera configuration 1. Table 2 shows a specific selection from the allowed values, wherein configuration 0 is a low resolution continuous (motion) configuration and configuration 1 is a full resolution single-shot (still)

configuration. When the camera is first powered up, default values are stored such as those shown in the first column of Table 2 for the continuous capture mode and in the second column for the single-shot capture mode" (emphasis added). Therefore, Endsley et al. disclose wherein the host computer (12) controls the camera (10) to take motion (low-resolution) images or to take still (high-resolution) images. Accordingly, Endsley et al. disclose using the electronic device for controlling, whether the digital image information, captured by the camera module, is to be transferred to the electronic device as such, or in a reduced form, as claimed.

However, Endsley et al. do not disclose wherein the camera module is an integral part of the electronic device.

On the other hand, Griencewic also disclose a camera module that electrically interfaces with an electronic device to provide image data to the electronic device (see figure 1). Furthermore, Griencewic teach wherein the camera module (26) is an integral part of the electronic device (20; see column 3, lines 38 – 46).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included the camera module as an integral part of the electronic device (as taught by Griencewic in the camera module/electronic device system (disclosed by Endsley et al.) for the advantage providing an electronic device that reduces the amount of set-up and tear down time and reduces effort to carry the device (see column 1, lines 19 – 63).

9. For **Claims 13 and 64**, Endsley et al. disclose, as shown in figures 1 – 3, a mobile station (12) connected to an camera module (10), the camera module (10) comprising an image sensor (20) comprising pixels (640x480) which convert light to which the pixels are exposed into an analogue signal (see column 3, lines 23 – 42), an analogue-to-digital conversion (26; see column

3, lines 23 – 42), and a serial connection circuit (40) for transferring the digital image information from the camera module (10) to the mobile station (12; see column 3, lines 23 – 42) and for receiving control information from the mobile station (see column 4, lines 60 – 67), wherein the control information operates to control the amount of the digital image information, captured by the camera module, to be transferred to the electronic device and the rate of the transfer of the digital image information as determined by the electronic device (see column 4, line 60 – column 5, line 43)

Endsley et al. state, "The host computer 12 controls the camera picture-taking process by instructing the camera 10 when to take still or motion pictures, and setting the electronic exposure time and the analog gain in the CDS/gain block 24 via the microprocessor 38. The USB hardware and software provides communication between the host 12 and the camera 10 through the aforementioned abstraction called a 'pipe'. When the camera 10 is connected to the host 12, camera driver software running on the host 12 indicates the latency and bandwidth required for the camera" (emphasis added).

Endsley et al. further state, "The operational modes of the camera 10 can be adjusted from the host computer 12. More particularly, the microprocessor 38 includes camera registers 72 that store at least two different camera configurations communicated from the host computer 12 for controlling the image sensor in at least two modes, wherein each configuration includes information defining a plurality of camera parameters as shown in the first column of Table 1 … Many of these parameters are particularly useful in the continuous (motion video) capture mode, in order to provide a higher video frame rate, and in determining how the camera moves from one configuration to the other" (emphasis added).

Endsley et al. further disclose, as stated in column 6 (lines 35 – 45), "As set forth in Table 1, the parameters include allowed values appropriate for two different camera configurations: therein called camera configuration 0 and camera configuration 1. Table 2 shows a specific selection from the allowed values, wherein configuration 0 is a low resolution continuous (motion) configuration and configuration 1 is a full resolution single-shot (still) configuration. When the camera is first powered up, default values are stored such as those shown in the first column of Table 2 for the continuous capture mode and in the second column for the single-shot capture mode" (emphasis added). Therefore, Endsley et al. disclose wherein the host computer (12) controls the camera (10) to take motion (low-resolution) images or to take still (high-resolution) images. Accordingly, Endsley et al. disclose using the electronic device for controlling, whether the digital image information, captured by the camera module, is to be transferred to the electronic device as such, or in a reduced form, as claimed.

However, Endsley et al. do not disclose wherein the camera module is an integral part of the mobile station.

On the other hand, Griencewic also disclose a camera module that electrically interfaces with a mobile station to provide image data to the electronic device (see figure 1). Furthermore, Griencewic teach wherein the camera module (26) is an integral part of the mobile station (20; see column 3, lines 38 – 46).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included the camera module as an integral part of the mobile station (as taught by Griencewic in the camera module/electronic device system (disclosed by Endsley et

al.) for the advantage providing an mobile station that reduces the amount of set-up and tear down time and reduces effort to carry the station (see column 1, lines 19 – 63).

10. As for **Claims 45, 47, and 49**, Endsley et al. teach that the digital image information is transferred to the electronic device under the control of the electronic device (see column 4, lines 60 – 67, and column 5, lines 1 and 2, the host computer controls the camera-picture process ...) and that the camera module is adapted to operate in either one of a normal photographic mode (single-shot mode) and a viewfinder mode (see Examiner's explanation below; continuous capture mode), wherein when operating in viewfinder mode the camera module reduces the quantity of digital image information to be transferred from the camera module to the electronic device compared with the quantity of digital image information that is transferred when the camera operates in normal photographic mode. As clearly stated in column 6 (lines 35 – 41), there are two modes of operation including a continuous capture (viewfinder) lower resolution mode and a single-shot (normal photographic) full resolution mode.

Endsley et al. does not specifically label a viewfinder mode; however one does in-fact exist. As asserted by Endsley et al. in describing the prior art (see column 1, lines 37 – 49) a motion mode is used to provide a preview image on a LCD viewfinder prior to still mode capture. Hence, a motion mode is a *viewfinder mode*. The claim language as presently claimed by the Applicant simply requires a *viewfinder mode* and a *normal photographic mode* and as defined above both are clearly taught by Endsley et al. continuous capture mode and single-shot capture mode. The continuous capture mode provides preview images, which can be recorded as permanent images, on the monitor and the single-shot capture mode allows the user to capture those very same images and others not viewed by the continuous capture mode. Moreover,

Endsley et al. state, in column 6 (lines 45 – 54), that the user can hold the camera while viewing the computer monitor display to create a motion sequence for videoconferencing, or in order to frame a person, object, or document to be captured.

11. As for **Claims 3, 9, and 50**, Endsley et al. disclose, as stated in column 5 (lines 55 – 66), that reduction of the quantity of digital image information to be transferred from the camera module is conducted by adjusting the conversion accuracy of the analog to digital conversion. The reduction of the quantity of digital image information (lowering of the resolution) is conducted by adjusting the conversion accuracy of the sampling of each color pixel. In the continuous capture (viewfinder) lower resolution mode, the number of bits per pixel sample is reduced from 8 bits to 4 bits, thereby reducing the color depth at each pixel and reducing the overall resolution of the image. The reduction from 8 bits to 4 bits is reducing the conversion accuracy of the analog to digital conversion.

12. As for **Claims 4, 10, and 51**, Endsley et al. disclose, as stated in column 6 (lines 35 – 41), that the reduction of the quantity of information to be transferred from the camera module is conducted by reducing the resolution of the image. Endsley et al. teach that there are two modes of operation including a continuous capture (viewfinder) lower resolution mode and a single-shot (normal photographic) full resolution mode; thereby the lower resolution mode is a reduction of the resolution of the image.

13. As for **Claims 5, 11, and 52**, Endsley et al. disclose, as stated in column 5 (lines 55 – 66), that the adjustment reduction of the resolution of the image is conducted by under-sampling of the digital image information. Endsley et al. teach of horizontal and vertical sub-sampling for every color.

14. As for **Claim 16**, Endsley et al. disclose, as stated in column 4 (lines 36 – 40), that said external connection bus (USB 42) comprises a serial bus ("stream" pipe) and a control serial bus ("one pipe for transporting control data to the camera") and that the mobile station is adapted to transfer control information to the camera module via said control serial bus ("one pipe for transporting control data to the camera") and to receive digital image information from the camera module in serial form via said serial bus ("stream pipe").

15. As for **Claims 21, 31, and 53**, Endsley et al. disclose, as stated in columns 4 (lines 60 – 64), 5 (lines 3 – 13), and 6 (lines 62 – 68), that the camera module is set into viewfinder mode responsive to a control signal received from the electronic device. The operational modes of the camera can be adjusted from the host computer insofar as the host computer provides camera parameters representative of at least two operational camera modes (the continuous capture viewfinder mode and the single-shot capture normal photographic mode) to govern the camera's actions in each of the operational modes. The camera parameters are stored in registers (72) within the camera's microprocessor (38). Therefore, since the camera parameters governing the operation of the continuous capture viewfinder mode are provided by the host computer and stored in the camera's microprocessor registers, the viewfinder mode is set responsive to a control signal (comprised of camera parameters) received from the electronic device.

16. As for **Claims 22, 32, and 54**, Endsley et al. disclose, as stated in columns 4 (lines 60 – 64), 5 (lines 3 – 13), and 6 (lines 62 – 68), that the camera module is set into normal photographic mode responsive to a control signal received from the electronic device. The operational modes of the camera can be adjusted from the host computer insofar as the host computer provides camera parameters representative of at least two operational camera modes

(the continuous capture viewfinder mode and the single-shot capture normal photographic mode) to govern the camera's actions in each of the operational modes. The camera parameters are stored in registers (72) within the camera's microprocessor (38). Therefore, since the camera parameters governing the operation of the single-shot capture normal photographic mode are provided by the host computer and stored in the camera's microprocessor registers, the normal photographic mode is set responsive to a control signal (comprised of camera parameters) received from the electronic device.

17. As for **Claims 23, 33, 44, and 55**, Endsley et al. teach that the camera module USB interface has one pipe for transporting control data to the camera module and another pipe for transporting image data from the camera module.

18. As for **Claims 24, 34, and 56**, Endsley et al. disclose, as stated in column 4 (lines 60 – 64), that the camera module takes a picture responsive to a control signal received from the electronic device. Endsley et al. teach that the electronic device (host computer) controls the camera picture-taking process by instructing the camera when to take still or motion pictures.

19. As for **Claims 25, 35, and 57**, Endsley et al. disclose, as stated in column 5 (lines 55 – 66), that reduction of the quantity of digital image information to be transferred from the camera module is conducted by leaving less significant bits of the digital image information un-transferred. As stated above, Endsley et al. teach that the reduction of the quantity of digital image information to be transferred from the camera module can be conducted by adjusting the conversion accuracy of the analog to digital conversion. The reduction of the quantity of digital image information (lowering of the resolution) is conducted by adjusting the conversion accuracy of the sampling of each color pixel. In the continuous capture (viewfinder) lower

resolution mode, the number of bits per pixel sample is reduced from 8 bits to 4 bits, thereby reducing the color depth at each pixel and reducing the overall resolution of the image and in-fact leaving less significant bits of the digital information to be transferred un-transferred.

20. As for **Claims 26 and 36**, Endsley et al. disclose, as shown in figure 1 and as stated in column 5 (lines 55 – 66), that the camera module captures an image with maximum resolution (images are always captured at a the imager resolution of 640 x 480) and reduces the quantity of digital image information to be transferred at the stage when the digital image information is transferred to the electronic device (digital section 30 is the stage when the digital information is transferred). Endsley et al. teach that a reduction of the quantity of digital image information takes place in the static ram memory (34).

21. As for **Claims 27 and 61**, Endsley et al. disclose a camera module that is connected to an electronic device via a serial connection. More specifically, Endsley et al. disclose, as shown in figure 1 and as stated in columns 3 (lines 6 – 67), 4 (lines 36 – 40 and 60 – 64), 5 (lines 3 – 67), 6 (lines 3 – 67), and 7 (lines 28 – 43), transferring image information from the camera module (analog section 22 and digital section 23) to the electronic device (host computer 12 including USB Host I/F 14 and computer monitor 16) wherein the digital image information transfer to the electronic device is performed via a serial connection (USB). Endsley et al. disclose, as shown in figure 1, that an image is displayed on a display (computer monitor 16) of the electronic device (host computer).

22. As for **Claims 28, 37, and 59**, Endsley et al. disclose, as stated in column 5 (lines 48 – 54), that the camera module crops a region from an image and transfers the digital image information of the cropped region to the electronic device. The operational modes of the camera

can be adjusted from the host computer insofar as the host computer provides camera parameters representative of at least two operational camera modes (the continuous capture viewfinder mode and the single-shot capture normal photographic mode) to govern the camera's actions in each of the operational modes. The camera parameters are stored in registers (72) within the camera's microprocessor (38). Of the plurality of camera parameters, a crop value parameter provides starting and ending lines and pixels to crop the image before it is transferred to the electronic device. Performing a crop on the image thereby reduces the amount of data that has to be sent to the electronic device (host computer).

23. As for **Claim 29 and 60**, Endsley et al. disclose, that the electronic device sends information about the region of the image to be cropped to the camera module. As stated above, the crop value parameter provided by the electronic device (host computer) provides starting and ending lines and pixels to crop the image before it is transferred to the electronic device.

24. **Claims 19 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Endsley et al. (US 6,005,613) in view of Griencewic (US 5,801,919) in further view of Hsieh et al. (US 5,969,750).

25. As for **Claims 19 and 30**, Endsley et al. (as modified by Griencewic) teach that it would have been obvious to one with ordinary skill in the art to apply the details of transferring digital information from the camera module to the electronic device, wherein the camera module is an integral part of the electronic device. However, the combined teachings are silent with regard to transferring digital image information from the camera module to the electronic device/mobile station via a network of electronic devices/mobile stations.

On the other hand, Hsieh et al. also disclose, as shown in figure 5 and as stated in columns 5 (lines 55 – 59), 6 (lines 27 – 47), 9 (lines 40 – 44), and 10 (lines 30 – 35), a camera module (110) connected to an electronic device/mobile station (120) for transferring digital image information (via USB 119). Hsieh et al. further teach transferring digital image information from the camera module (110) to the electronic device/mobile station (120) via a network of electronic devices/mobile stations (100').

As stated in column 10 (lines 30 – 35), at the time the invention was made one with ordinary skill in the art would have been motivated to transfer digital image information from the camera module to the electronic device/mobile station via a network of electronic devices/mobile stations as taught by Hsieh et al. in the camera module/electronic device/mobile station of Endsley et al. (as modified by Griencewic) as a means to share electronic devices/mobile stations among multiple camera modules. Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to transfer digital image information from the camera module to the electronic device/mobile station via a network of electronic devices/mobile stations as taught by Hsieh et al. in the camera module/electronic device/mobile station of Endsley et al. (as modified by Griencewic).

26. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Endsley et al. (US 6,005,613) in view of Griencewic (US 5,801,919) in further view of Miyake (US 6,400,413 B1).

27. As for **Claim 6**, Endsley et al. (as modified by Griencewic) teach that it would have been obvious to one with ordinary skill in the art to apply the details of transferring digital information from the camera module to the electronic device, wherein the camera module is an integral part

of the electronic device. The combined teachings further teach that the reduction of the quantity of information to be transferred from the camera module is conducted by reducing the resolution of the image. However, the combined teachings are silent with regard to that the resolution of the image is restored in the electronic device; the resolution is restored by interpolation from the received digital image information.

On the other hand, Miyake disclose, as shown in figure 1 and as stated in columns 4 (lines 65 and 66), 5 (lines 55 – 61), and 11 (lines 37 – 52), a method, that can be incorporated into an electronic device, in which the resolution of a low resolution image (input at 100) is restored into a high resolution image (output at 106).

As stated in column 11 (lines 31 – 36), at the time the invention was made, one with ordinary skill in the art would have been motivated to include the method of restoring the resolution of a low resolution image as taught by Miyake in the electronic device of Endsley et al. (as modified by Griencewic) as means to provide a clear jag-less high quality output image even based on an original image of which information quantity is low. Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included the method of restoring the resolution of a low resolution image as taught by Miyake in the electronic device of Endsley et al. (as modified by Griencewic).

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

29. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Vivek Srivastava can be reached on 571.272.7304. The fax phone number for the organization where this application or proceeding is assigned is 571.273.3000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
April 12, 2007

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